

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1-8. (Canceled)

9. (Currently amended) An image display device for forming images by causing a phosphor layer to emit light with electrons emitted from electron-emitting elements, the image display device comprising:

a vacuum container;

a phosphor layer;

an anode wiring contacting the phosphor layer;

a substrate provided with a cathode wiring made of a patterned conductor; and

electron-emitting elements made by

applying, to predetermined positions of the substrate, a carbon ink made into a paste with an organic binder and a solvent, the ink comprising (i) carbon particles having a 6-membered carbon ring, and (ii) support particles for supporting the carbon particles, and

firing the ink, wherein, after the firing, the support particles are decomposed, forming voids in an aggregation of the carbon particles;

wherein the cathode wiring is patterned into stripes;

the phosphor layer has electrically separated stripes that are arranged in a plane substantially parallel to the stripes of the cathode wiring and extend substantially perpendicular to the stripes of the cathode wiring; and the image display device is matrix-driven between the stripes of the phosphor layer and the stripes of the cathode wiring.

10. (Currently amended) An image display device for forming images by causing a phosphor layer to emit light with electrons emitted from electron-emitting elements, the image display device comprising:

a vacuum container;

a phosphor layer;

an anode wiring contacting the phosphor layer;

a substrate provided with a cathode wiring made of a patterned conductor;

electron-emitting elements made by

applying, to predetermined positions of the substrate, a carbon ink made into a paste with an organic binder and a solvent, the ink comprising (i) carbon particles having a 6-membered carbon ring, and (ii) support particles for supporting the carbon particles, and

firing the ink; wherein, after the firing, the support particles are decomposed, forming voids in an aggregation of the carbon particles; and

gate electrodes arranged between the phosphor layer and the substrate;

wherein the cathode wiring is patterned into stripes;

the gate electrodes have electrically separated stripes that are arranged in a plane substantially parallel to the stripes of the cathode wiring and extend substantially perpendicular to the stripes of the cathode wiring; and the image display device is matrix-driven between the stripes of the phosphor layer and the stripes of the cathode wiring.

11. (Original) The image display device of Claim 10, further comprising control electrodes between the phosphor layer and the gate electrodes, the control electrodes functioning to focus or to focus and deflect an electron beam.

12. (Original) The image display device of Claim 9, wherein the substrate is integrated into the vacuum container.

13. (Original) The image display device of Claim 10, wherein the substrate is integrated into the vacuum container.

14. (New) An image display device for forming images by causing a phosphor layer to emit light with electrons emitted from electron-emitting elements, the image display device comprising:

a vacuum container;

a phosphor layer;

an anode wiring contacting the phosphor layer;

a substrate provided with a cathode wiring made of a patterned conductor; and

electron-emitting elements made by

applying, to predetermined positions of the substrate, a carbon ink made into a paste with an organic binder and a solvent, the ink comprising (i) carbon particles having a 6-membered carbon ring, and (ii) support particles for supporting the carbon particles, and

firing the ink; wherein the support particles are made of powder that decomposes into a gas when heated or burned, and

wherein the decomposition temperature of the support particles is lower than the decomposition temperature of the organic binder; and

wherein the cathode wiring is patterned into stripes;

the phosphor layer has electrically separated stripes that are arranged in a plane substantially parallel to the stripes of the cathode wiring and extend substantially perpendicular to the stripes of the cathode wiring; and the image display device is matrix-driven between the stripes of the phosphor layer and the stripes of the cathode wiring.

15. (New) The image display device of claim 14, wherein the substrate is integrated into the vacuum container.

16. (New) An image display device for forming images by causing a phosphor layer to emit light with electrons emitted from electron-emitting elements, the image display device comprising:

a vacuum container;

a phosphor layer;

an anode wiring contacting the phosphor layer;

a substrate provided with a cathode wiring made of a patterned conductor;

electron-emitting elements made by

applying, to predetermined positions of the substrate, a carbon ink made into a paste with an organic binder and a solvent, the ink comprising (i) carbon particles having a 6-membered carbon ring, and (ii) support particles for supporting the carbon particles, and

firing the ink; wherein the support particles are made of powder that decomposes into a gas when heated or burned, and

wherein the decomposition temperature of the support particles is lower than the decomposition temperature of the organic binder, and

wherein the cathode wiring is patterned into stripes; and

gate electrodes arranged between the phosphor layer and the substrate;

wherein the cathode wiring is patterned into stripes;

the gate electrodes have electrically separated stripes that are arranged in a plane substantially parallel to the stripes of the cathode wiring and extend substantially perpendicular to the stripes of the cathode wiring; and the image display device is matrix-driven between the stripes of the phosphor layer and the stripes of the cathode wiring.

17. (New) The image display device of Claim 16, further comprising control electrodes between the phosphor layer and the gate electrodes, the control electrodes functioning to focus or to focus and deflect an electron beam.

18. (New) The image display device of Claim 16, wherein the substrate is integrated into the vacuum container.

Amendments to the Drawings:

The sheets of drawings attached in the Appendix include changes to Fig. 6 and 7. These sheets replace the original sheets. The drawings have been changed as follows: Anode wiring 34 has been inserted in Figs. 6 and 7. This change is supported in Fig. 5 and throughout the specification. Elements 44 and 51 of Fig. 7 have been filled in for clarity.